

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No.	:	10/033,328	Confirmation No.	9602
Applicant	:	Patek		
Filed	:	11/2/2001		
TC/A.U.	:	2153		
Examiner	:	Strange		
Docket No.	:	T015-P07180US		
Customer No.	:	33356		

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REQUEST FOR REHEARING under 27 CFR § 41.52**

Dear Sir:

In response to the Decision of the Board of Patent Appeals and Interferences mailed September 23, 2010, reconsideration of the rejection of claims 22-24 of the above-referenced application is requested.

## INTRODUCTION

Reconsideration of the Board decision with respect to claim 22-24 is respectfully requested on the grounds that the Board misapprehended or overlooked points of the Applicant's Appeal Brief and Reply Brief. In particular, the Board apparently interpreted Applicant's arguments in the Reply Brief as only that the reference fail to teach or suggest the "first cross bar switch", "the second crossbar switch" and "the control unit". In addition, the Board apparently interpreted a portion of Applicant's discussion of claim 22 in the Reply brief as arguing that Chin failed to anticipate the claim. To the contrary, the Applicant was attempting to argue that the Examiner had failed to make a prima face case of obviousness and, in particular, had failed to identify where the elements of the claim (which encompass much more than simply two crossbar switches and a control unit) could be found in the prior art.

The application was filed on November 2, 2001. After more than five years of prosecution including three prior Office actions and a previous Appeal, the claims of the application were finally rejected in an Office action mailed April 17, 2007. A Notice of Appeal and an Appeal Brief were timely filed. The Examiner's Reply was mailed on March 28, 2008, and a Reply Brief was filed on May 21, 2008, leading to a Decision on Appeal by the Board of Patent Appeals and Interferences on September 23, 2010. Throughout the prosecution history, claims 22-24 were not amended and remain in their original form. Claim 22 reads as follows:

22. A system for multicasting a frame in a router having a plurality of input ports and a plurality of output ports, comprising:
- a first crossbar switch for transferring said frame from an input port of said plurality of input ports to a shared memory;
  - a frame pointer for referencing said frame stored in said shared memory;
  - a second crossbar switch for transferring said frame using said frame pointer to a plurality of selected output ports of said plurality of output ports; and
  - a control unit for selecting said plurality of selected output ports using a multicast data structure having predetermined multicast routes.

Independent claim 22 stands rejected as unpatentable under 35 U.S.C. 103(a) over *Chin* (US 5,617,421) in view of *Nolan* (US 6,661,790 B1).

## FINAL OFFICE ACTION

In the final Office action mailed 4/17/2007, the entire rationale for the rejection of claim 22 reads “Claims 15 and 22 are rejected under the same rationale as claim 8, since they recite substantially identical subject matter. Any differences between the claims do not result in patentable distinct claims and all of the limitations are taught by the above-cited references (*Chin* and *Nolan*)”.

The Applicant does not dispute the Examiner’s logic with respect to independent claims 14 and 8, since claim 14 recites an apparatus specifically for performing the method recited in claim 8. However, as shown in the table below (presented in Applicant’s reply brief) there is no correspondence between the elements of claim 8 and the elements of claim 22:

<u>Claim 8</u>	<u>Claim 22</u>
<p>A method for multicasting a frame in a router, said router comprising an input queue and a plurality of output queues, said method comprising:</p> <p style="padding-left: 40px;">determining a destination identifier for said frame received by said input queue;</p> <p style="padding-left: 40px;">using said destination identifier, locating a data structure comprising a mask for said plurality of output queues; and</p> <p style="padding-left: 40px;">transferring a reference to said frame to at least two selected output queue controllers in accordance with said mask, wherein the reference to said frame is</p>	<p>A system for multicasting a frame in a router having a plurality of input ports and a plurality of output ports, comprising:</p> <p style="padding-left: 40px;">a first crossbar switch for transferring said frame from an input port of said plurality of input ports to a shared memory;</p> <p style="padding-left: 40px;">a frame pointer for referencing said frame stored in said shared memory;</p> <p style="padding-left: 40px;">a second crossbar switch for transferring said frame using said frame pointer to a plurality of selected output ports of said plurality of output ports; and</p> <p style="padding-left: 40px;">a control unit for selecting said plurality of selected output ports using a multicast data structure having predetermined</p>

concurrently transferred to at least two selected output queue controllers in accordance with said mask.	multicast routes.
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As can be seen, there is no correspondence between the elements of the two claims. While both claims involve multicasting, claim 8 recites a method in which a reference to a frame is concurrently transferred to two or more output queue controllers. Claim 22 recites an apparatus in which a frame is transferred into a shared memory via a first crossbar switch; the frame (not a reference to the frame) is then transferred from the shared memory to a plurality of output ports via a second crossbar switch. These are not the same thing. Thus the final Office action failed to provide a viable rationale for the rejection of claim 22.

### **THE APPEAL BRIEF**

In the Appeal Brief, the Applicant provided two arguments supporting the allowability of claim 22. First, the Applicant argued that, by not even attempting to identify where the elements of claim 22 could be found in the prior art, the Examiner had failed to show a *prima face* case of obviousness. Second, the Applicant argued that, even if the two-sentence rationale for the rejection of claim 22 was considered to be a *prima face* case, the elements of claim 22 could not, in fact, be found in the cited references.

### **THE EXAMINER'S ANSWER**

In the Examiner's Answer, the responded to the Applicant's arguments in the Appeal Brief by again asserting (incorrectly, as previously discussed) that "claim 22 is a system that substantially corresponds to method claim 8. The claimed switches and control unit are merely the hardware that performs the method of claim 8". The Examiner further attempted to remedy the deficiency of the final Office action by identifying specific portions of the disclosure of Chin held to disclose the first and second crossbars switches and the control unit recited in claim 22. Specifically, the Examiner's Answer asserts that the first crossbar switch corresponds to Chin's receive circuitry of the switch ports, the second crossbar switch corresponds to Chin's processing and forwarding circuitry, and the control unit corresponds to portions of Chin's switching fabric circuit.

## **THE REPLY BRIEF**

In the Reply Brief, the Applicant again argued that the final Office action failed to identify where any of the limitations of claim 22 could be found in the prior art (and thus failed to establish a *prima face* case of obviousness). The Applicant also argued that the Examiner's assertions, first offered in the Examiner's Answer, as to where elements of claim 22 could be found in the prior art were not reasonable given the disclosure of the references. In hindsight, these arguments placed too much emphasis on whether or not Chin's receive circuitry of the switch ports and Chin's processing and forwarding circuitry correspond to first and second crossbar switches as recited in the claims. These arguments apparently lead the Board to believe that this was the fundamental question of patentability. However, the Applicant's fundamental argument, as stated in both the Appeal Brief and the Reply Brief, is the Chin and Nolan, in combination, fail to teach or suggest the elements of the claim, which encompass more than just switches.

## **REQUEST FOR REHEARING**

In the Decision on Appeal, the Board noted that "one of ordinary skill in the art would understand that Chin in view of Nolan suggested a switching fabric circuit that includes an element for transferring the packet data from an input port, an element for transferring the frame to selected output ports, and a control unit for selecting the output ports" which the Board viewed as sufficient to make the claimed subject matter obvious. However, even if Chin and Nolan suggest a first crossbar switch, a second crossbar switch, and a control unit, that is insufficient to suggest the elements of the claim.

Claim 22 does not merely recite "a first crossbar switch". The claim recites "a first crossbar switch for transferring said frame from an input port of said plurality of input ports to a shared memory". No such shared memory is taught or suggested by chin and/or Nolan. Claim 22 does not merely recite "a second crossbar switch". The claim recites "a second crossbar switch for transferring said frame using said frame pointer (previously recited to reference the frame stored in the shared

memory) to a plurality of selected output ports of said plurality of output ports”. No such frame pointer or a switch using a frame pointer is taught or suggested by Chin and Nolan.

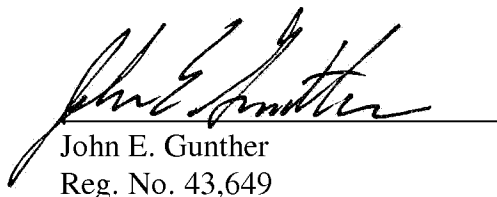
The Applicant is not naïve enough to think that shared memories or shared memory switches were unknown in the art prior to this application. However, claim 22 recites a particular structure for a shared memory switch that accomplishes multicasting by transferring a frame from the shared memory to a plurality of output ports using a frame pointer and a multicast data structure. The Applicant submits that the final Office action, the Examiner’s answer, and, with all due respect, the Decision on Appeal fail to show where all elements of claim 22 can be found in the prior art, and further fail to provide any rationale for combining those elements as combined in the claim.

## **CONCLUSION AND RELIEF**

In view of the foregoing, it is believed that independent claim 22 and depending claims 23-24 patentably define the subject invention over the prior art of record and are in condition for allowance. The undersigned requests that the Board overturn the rejection of these claims and hold that claims 22-24 of the above referenced application are allowable.

Date: November 23, 2010

Respectfully submitted,



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